

ABSTRACT OF THE DISCLOSURE

An illumination optical system which can use light from a light source with high efficiency and can provide an illumination luminous flux with highly uniform illuminance, is disclosed. The illumination optical system illuminates an illumination surface with a generally telecentric illumination luminous flux. In light intensity distribution of illumination light on the illumination surface changing depending on a deviation angle of an incident ray with respect to a normal to the illumination surface, the illumination optical system operates the illumination luminous flux such that a ratio of angle widths at which light intensity reaches half of a peak value in each of two axis directions orthogonal to each other on the illumination surface is an aspect ratio of 2:1.